ABSTRACT

The present invention provides an apparatus and system for high speed end-to-end telecommunication traffic using an Asynchronous Transfer Mode (ATM) architecture for convergence of video, data and voice in an SOHO application using a DSL router. An ATM processor (120) enables traffic shaping, and operation and maintenance processing within a single module. The ATM processor (120) further includes a processor (114) which executes firmware from a program memory (110). A register block (116) is provided for communicating setup and teardown notification, and OAM configuration to the processor (114) and a connection state RAM (12) provides for communicating connection configuration in which this information is used by the processor (114) when performing the functions of switching, QoS, and OAM. Transmit scheduler hardware (118) is provided for the scheduling of ATM cell transmission and is configured by the processor (114).